

# Exhibit A

# 0-order Charging

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CYPRESS

PERFORM

# Charging

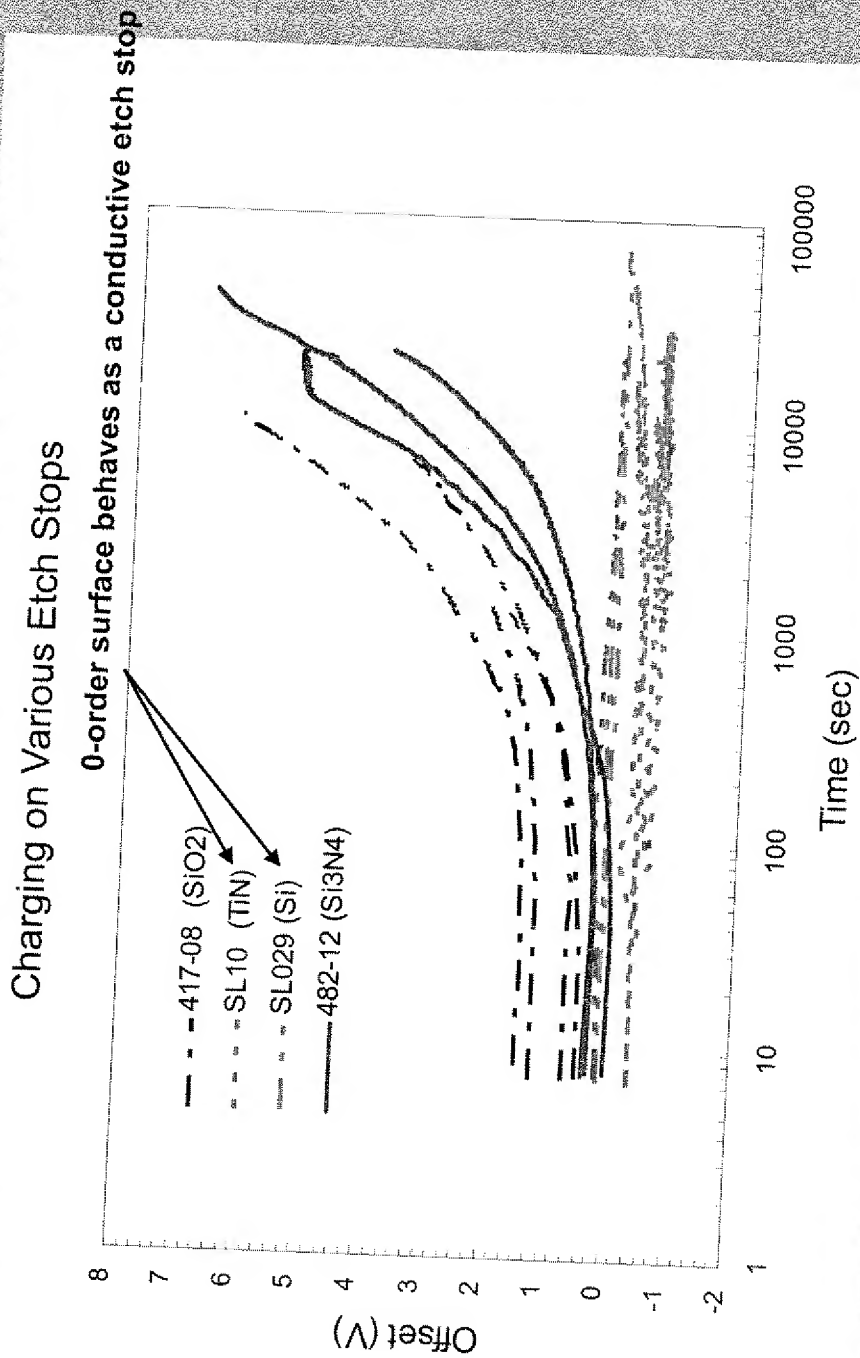
- Charging occurs due to a buildup of charge species on free dielectrics
- When electric field is applied between 2 open electrodes, charge species migrate to the appropriate poles
- If they migrate and stop on a dielectric, they cannot dissipate – the charge will build up and cause the field to be altered, which in turn changes the device behavior
- If the surface of the poles are conductive, the charge can dissipate
- The 0-order device of the patent has conductive traces on the etch stop that are properly grounded, thus capable of “sinking” charge build up induced by a large E-field



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# Typical Charging Test



## Induced offset over time

This is measured by electrically stressing a ribbon and optically interrogating the amount of deflection induced by a fixed voltage. The electrical stress will change the amount of deflection induced by a fixed voltage over time if "charging" occurs.

